

| Ref # | Hits | Search Query  | DBs  | Default Operator | Plurals | Time Stamp       |
|-------|------|---|--|------------------|---------|------------------|
|       |      | (eccentric near2 cam) and shaft and reciprocating and (cutting and (tube or pipe) | US-PGPUB; USPAT                                    | OR               | ON      | 2004/05/26 14:02 |
|       |      | 30/90-102.ccls.   | US-PGPUB; USPAT                                    | OR               | ON      | 2004/05/25 10:24 |
|       |      | (30/90-96.ccls.) and ((tube or pipe) same (cutting or trimming or notching))      | US-PGPUB; USPAT                                    | OR               | ON      | 2004/05/25 10:22 |
|       |      | (30/90-102.ccls.) and ((tube or pipe) same (cutting or trimming or notching))     | US-PGPUB; USPAT                                    | OR               | ON      | 2004/05/25 10:22 |
|       |      | (30/90-102).CCLS.   | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR               | OFF     | 2004/05/25 10:19 |
|       |      | 30/90-102.ccls. and ((tube or pipe) same (cutting or trimming or notching))       | US-PGPUB; USPAT                                    | OR               | ON      | 2004/05/25 10:19 |
|       |      | 30/90-102.ccls. and ((tube or pipe) same (cutting or trimming or notching))       | US-PGPUB; USPAT                                    | OR               | ON      | 2004/05/26 10:10 |
| S1    | 185  | 83/178  | US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB        | OR               | ON      | 2004/05/24 17:37 |
| S2    | 111  | 83/185  | US-PGPUB; USPAT                                    | OR               | ON      | 2004/05/24 17:38 |
| S3    | 49   | 83/185 and (tube or pipe)   | US-PGPUB; USPAT                                    | OR               | ON      | 2004/05/24 17:40 |
| S4    | 57   | 83/191 and (tube or pipe)   | US-PGPUB; USPAT                                    | OR               | ON      | 2004/05/24 17:47 |
| S5    | 55   | 83/582 and (tube or pipe)   | US-PGPUB; USPAT                                    | OR               | ON      | 2004/05/24 17:49 |
| S6    | 52   | 83/588 and (tube or pipe)   | US-PGPUB; USPAT                                    | OR               | ON      | 2004/05/24 17:51 |
| S7    | 19   | 83/627 and (tube or pipe)   | US-PGPUB; USPAT                                    | OR               | ON      | 2004/05/24 17:51 |
| S8    | 45   | 83/628 and (tube or pipe)   | US-PGPUB; USPAT                                    | OR               | ON      | 2004/05/24 17:53 |
| S9    | 70   | 83/914 and (tube or pipe)   | US-PGPUB; USPAT                                    | OR               | ON      | 2004/05/24 17:54 |
| S10   | 24   | 83/916 and (tube or pipe)   | US-PGPUB; USPAT                                    | OR               | ON      | 2004/05/24 18:24 |

|     |         |   |                    |    |    |                  |
|-----|---------|---|--------------------|----|----|------------------|
| S11 | 65      | 83/917 and (tube or pipe)   | US-PGPUB;<br>USPAT | OR | ON | 2004/05/24 18:26 |
| S12 | 1850    | "83"/\$.ccls. and ((tube or pipe) same (cutting or trimming or notching))             | US-PGPUB;<br>USPAT | OR | ON | 2004/05/25 09:46 |
| S13 | 361     | 83/54 and ((tube or pipe) same (cutting or trimming or notching))                     | US-PGPUB;<br>USPAT | OR | ON | 2004/05/25 10:01 |
| S14 | 10      | 83/36 and ((tube or pipe) same (cutting or trimming or notching))                     | US-PGPUB;<br>USPAT | OR | ON | 2004/05/25 10:01 |
| S15 | 12      | 83/471 and ((tube or pipe) same (cutting or trimming or notching))                    | US-PGPUB;<br>USPAT | OR | ON | 2004/05/25 10:02 |
| S16 | 40      | 83/452 and ((tube or pipe) same (cutting or trimming or notching))                    | US-PGPUB;<br>USPAT | OR | ON | 2004/05/25 10:03 |
| S17 | 93      | 82/46 and ((tube or pipe) same (cutting or trimming or notching))                     | US-PGPUB;<br>USPAT | OR | ON | 2004/05/25 10:07 |
| S18 | 824     | "82"/\$.ccls. and ((tube or pipe) same (cutting or trimming or notching))             | US-PGPUB;<br>USPAT | OR | ON | 2004/05/25 10:07 |
| S19 | 241     | "82"/\$.ccls. and ((tube or pipe) same (cutting or trimming or notching)) and sliding | US-PGPUB;<br>USPAT | OR | ON | 2004/05/25 10:16 |
| S20 | 5       | 83/189 and ((tube or pipe) same (cutting or trimming or notching)) and sliding        | US-PGPUB;<br>USPAT | OR | ON | 2004/05/25 10:17 |
| S21 | 13      | 83/189 and ((tube or pipe) same (cutting or trimming or notching))                    | US-PGPUB;<br>USPAT | OR | ON | 2004/05/25 10:20 |
| S22 | 2737791 | "30"/(90-102).ccls. and ((tube or pipe) same (cutting or trimming or notching))       | US-PGPUB;<br>USPAT | OR | ON | 2004/05/25 10:19 |
| S23 | 8       | 30/90 and ((tube or pipe) same (cutting or trimming or notching))                     | US-PGPUB;<br>USPAT | OR | ON | 2004/05/25 10:27 |
| S24 | 0       | 83/471.2-477.1.ccls   | US-PGPUB;<br>USPAT | OR | ON | 2004/05/25 10:23 |
| S25 | 1720    | 83/471.2-477.1.ccls.  | US-PGPUB;<br>USPAT | OR | ON | 2004/05/25 10:23 |
| S26 | 45      | 30/91.2 and ((tube or pipe) same (cutting or trimming or notching))                   | US-PGPUB;<br>USPAT | OR | ON | 2004/05/25 10:27 |
| S27 | 1       | "6688207"   | US-PGPUB;<br>USPAT | OR | ON | 2004/05/25 10:47 |
| S28 | 1       | "6695191"   | US-PGPUB;<br>USPAT | OR | ON | 2004/05/25 10:47 |
| S29 | 295     | 30/90.6   | US-PGPUB;<br>USPAT | OR | ON | 2004/05/25 10:48 |
| S30 | 489     | 385/75  | US-PGPUB;<br>USPAT | OR | ON | 2004/05/25 10:49 |

|     |      |  |                    |    |    |                  |
|-----|------|--|--------------------|----|----|------------------|
| S31 | 10   | "5345952"  | US-PGPUB;<br>USPAT | OR | ON | 2004/05/25 11:05 |
| S32 | 345  | "83"/\$.ccls. and (rotating near3<br>cam)  | US-PGPUB;<br>USPAT | OR | ON | 2004/05/25 11:17 |
| S33 | 6618 | (rotating near3 cam) same shaft  | US-PGPUB;<br>USPAT | OR | ON | 2004/05/25 11:17 |
| S34 | 2511 | (rotating near2 cam) near4 shaft   | US-PGPUB;<br>USPAT | OR | ON | 2004/05/25 11:17 |
| S35 | 1969 | (rotating near2 cam) near2 shaft   | US-PGPUB;<br>USPAT | OR | ON | 2004/05/25 11:17 |
| S36 | 1160 | (rotating near1 cam) near2 shaft   | US-PGPUB;<br>USPAT | OR | ON | 2004/05/25 11:24 |
| S37 | 187  | ((rotating near1 cam) near2<br>shaft) and cutting  | US-PGPUB;<br>USPAT | OR | ON | 2004/05/25 11:19 |
| S38 | 973  | ((rotating near1 cam) near2<br>shaft) not ((rotating near1 cam)<br>near2 shaft) and cutting)   | US-PGPUB;<br>USPAT | OR | ON | 2004/05/25 11:35 |
| S39 | 194  | ((rotating near1 cam) near2<br>shaft) not ((rotating near1 cam)<br>near2 shaft) and cutting)) and<br>eccentric   | US-PGPUB;<br>USPAT | OR | ON | 2004/05/25 11:35 |
| S40 | 5    | ("2327646"   "4079647"  <br>"4579029"   "4622793"  <br>"4833958").PN.  | USPAT              | OR | ON | 2004/05/25 11:41 |
| S41 | 13   | "4987811".URPN.  | USPAT              | OR | ON | 2004/05/25 11:41 |
| S42 | 1    | "2812619".PN.  | USPAT              | OR | ON | 2004/05/25 11:42 |
| S43 | 7    | "4230010".URPN.  | USPAT              | OR | ON | 2004/05/25 11:42 |
| S44 | 40   | ("0155347"   "0211619"  <br>"0374464"   "0524691"  <br>"0706279"   "1384696"  <br>"1431641"   "1594155"  <br>"1665805"   "1847273"  <br>"2431567"   "2708970"  <br>"2882971"   "3170349"  <br>"3465634"   "3469481"  <br>"3779113"   "4007653"  <br>"4166403"   "4420314"  <br>"4257292"   "4696211"  <br>"4987811"   "5025691"  <br>"5056392"   "5176057"  <br>"5214991"   "5259225"  <br>"5438897"   "5444908"  <br>"5632188"   "5697278"  <br>"5752424"   "5839341"  <br>"5871788"   "5943934"  <br>"6076447"   "6152005"  <br>"6289709"   "6367362").PN. | USPAT              | OR | ON | 2004/05/25 11:43 |
| S45 | 0    | "6698324".URPN.  | USPAT              | OR | ON | 2004/05/25 11:44 |
| S46 | 0    | "6698324".URPN.  | USPAT              | OR | ON | 2004/05/25 11:44 |

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|-----|------|---|---|----|----|------------------|
| S47 | 14   | ("0756902"   "0909285"  <br>"1243656"   "1312067"  <br>"1553378"   "2745492"  <br>"3387525"   "3768359"  <br>"3968713"   "3987695"  <br>"4987811"   "5178049"  <br>"5588344"   "5664473").PN.                                   | USPAT   | OR | ON | 2004/05/25 11:44 |
| S48 | 1    | "6269721".URPN.   | USPAT   | OR | ON | 2004/05/25 11:45 |
| S49 | 1719 | (tube or pipe) and holder and tool<br>and rotating and cam  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2004/05/25 18:27 |
| S50 | 17   | (tube or pipe) same holder same<br>tool same rotating same cam  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2004/05/25 18:02 |
| S51 | 342  | (tube or pipe) and holder and tool<br>and rotating and cam and<br>reciprocating   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2004/05/25 18:04 |
| S52 | 1719 | ((tube or pipe) and holder and tool<br>and rotating and cam) not (((tube<br>or pipe) same holder same tool<br>same rotating same cam) and<br>((tube or pipe) and holder and tool<br>and rotating and cam and<br>reciprocating)) | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2004/05/25 18:22 |
| S53 | 1702 | ((tube or pipe) and holder and tool<br>and rotating and cam) not ((tube<br>or pipe) same holder same tool<br>same rotating same cam)  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2004/05/25 18:23 |
| S54 | 1377 | ((tube or pipe) and holder and tool<br>and rotating and cam) not ((tube<br>or pipe) and holder and tool and<br>rotating and cam and<br>reciprocating)   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2004/05/25 18:24 |
| S55 | 129  | ((tube or pipe) near4 cutting) and<br>holder and tool and rotating and<br>cam   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2004/05/26 07:44 |
| S56 | 271  | ((tube or pipe) near4 cutting) and<br>holder and rotating and cam   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2004/05/26 07:44 |

|     |     |  |   |    |    |                  |
|-----|-----|--|---|----|----|------------------|
| S57 | 142 | ((tube or pipe) near4 cutting) and holder and rotating and cam) not<br>(((tube or pipe) near4 cutting) and holder and tool and rotating and cam) | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2004/05/26 07:45 |
| S58 | 0   | 383/188  | US-PGPUB;<br>USPAT                                      | OR | ON | 2004/05/26 10:10 |
| S59 | 172 | 83/188   | US-PGPUB;<br>USPAT                                      | OR | ON | 2004/05/26 10:20 |
| S60 | 38  | 83/188   | USOCR   | OR | ON | 2004/05/26 10:22 |
| S61 | 29  | 83/189   | US-PGPUB;<br>USPAT                                      | OR | ON | 2004/05/26 10:24 |
| S62 | 11  | 83/189   | USOCR   | OR | ON | 2004/05/26 10:44 |
| S63 | 148 | 83/191   | US-PGPUB;<br>USPAT                                      | OR | ON | 2004/05/26 11:08 |
| S64 | 53  | 83/191   | USOCR   | OR | ON | 2004/05/26 11:11 |
| S65 | 72  | 83/178-195.ccls. and cam   | US-PGPUB;<br>USPAT                                      | OR | ON | 2004/05/26 11:12 |
| S66 | 567 | 83/178-195.ccls.   | US-PGPUB;<br>USPAT                                      | OR | ON | 2004/05/26 11:12 |
| S67 | 72  | 83/178-195.ccls. and cam   | US-PGPUB;<br>USPAT                                      | OR | ON | 2004/05/26 11:17 |
| S68 | 325 | "82"/\$.ccls. and (tube or pipe) and cutting and cam   | US-PGPUB;<br>USPAT                                      | OR | ON | 2004/05/26 11:33 |
| S69 | 672 | "82"/\$.ccls. and (tube or pipe) and cutting and cam   | USOCR   | OR | ON | 2004/05/26 13:29 |
| S70 | 10  | "2670795"  | US-PGPUB;<br>USPAT                                      | OR | ON | 2004/05/26 13:32 |
| S71 | 14  | "3120143"  | US-PGPUB;<br>USPAT                                      | OR | ON | 2004/05/26 13:35 |
| S72 | 14  | "3234838"  | US-PGPUB;<br>USPAT                                      | OR | ON | 2004/05/26 13:37 |
| S73 | 4   | "3455196"  | US-PGPUB;<br>USPAT                                      | OR | ON | 2004/05/26 13:38 |
| S74 | 10  | "3762263"  | US-PGPUB;<br>USPAT                                      | OR | ON | 2004/05/26 13:40 |
| S75 | 6   | "3921482"  | US-PGPUB;<br>USPAT                                      | OR | ON | 2004/05/26 13:40 |
| S76 | 14  | "3924502"  | US-PGPUB;<br>USPAT                                      | OR | ON | 2004/05/26 13:48 |
| S77 | 15  | "3971275"  | US-PGPUB;<br>USPAT                                      | OR | ON | 2004/05/26 13:49 |
| S78 | 206 | (eccentric near2 cam) and shaft and reciprocating and cutting and (tube or pipe)   | US-PGPUB;<br>USPAT                                      | OR | ON | 2004/05/26 14:03 |

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| S79 | 206 | (eccentric near2 cam) and shaft and reciprocating and (cutting and (tube or pipe))  | US-PGPUB; USPAT | OR | ON | 2004/05/26 14:39 |
| S80 | 0   | ((eccentric near2 cam) and shaft and reciprocating and (cutting and (tube or pipe))) not ((eccentric near2 cam) and shaft and reciprocating and cutting and (tube or pipe))   | US-PGPUB; USPAT | OR | ON | 2004/05/26 14:03 |
| S81 | 514 | (eccentric near2 cam) and shaft and cutting and (tube or pipe)  | US-PGPUB; USPAT | OR | ON | 2004/05/26 14:04 |
| S82 | 308 | ((eccentric near2 cam) and shaft and cutting and (tube or pipe)) not ((eccentric near2 cam) and shaft and reciprocating and (cutting and (tube or pipe)))   | US-PGPUB; USPAT | OR | ON | 2004/05/26 14:04 |
| S83 | 232 | (eccentric near2 cam) and shaft and reciprocating and (cutting and (tube or pipe))  | USOCR           | OR | ON | 2004/05/26 14:05 |
| S84 | 153 | (eccentric near2 cam) and shaft and reciprocating and (cutting same (tube or pipe))   | USOCR           | OR | ON | 2004/05/26 14:05 |
| S85 | 12  | "3120143".URPN.   | USPAT           | OR | ON | 2004/05/26 14:32 |
| S86 | 3   | "3455196".URPN.   | USPAT           | OR | ON | 2004/05/26 14:33 |
| S87 | 5   | ("3495615"   "3606565"   "3617145"   "3620115"   "0114446").PN.   | USPAT           | OR | ON | 2004/05/26 14:33 |
| S88 | 8   | "3762263".URPN.   | USPAT           | OR | ON | 2004/05/26 14:34 |
| S89 | 19  | ("0984577"   "1774567"   "2204516"   "2225272"   "2473654"   "3093023"   "3117375"   "3651569"   "3802793"   "3924502"   "4014063"   "4099310"   "4488467"   "4825543"   "5018275"   "5125690"   "5129158"   "5203083"   "5285576").PN. | USPAT           | OR | ON | 2004/05/26 14:34 |
| S90 | 4   | "5600862".URPN.   | USPAT           | OR | ON | 2004/05/26 14:35 |
| S91 | 8   | "3292473".URPN.   | USPAT           | OR | ON | 2004/05/26 14:36 |
| S92 | 8   | "3292473".URPN.   | USPAT           | OR | ON | 2004/05/26 14:36 |
| S93 | 14  | ("1946926"   "2079974"   "3292473"   "4329899"   "4462290"   "4919025"   "4939967"   "4987808"   "5074018"   "5097576"   "5133492"   "5143268"   "5313862"   "5826479").PN.   | USPAT           | OR | ON | 2004/05/26 14:37 |
| S94 | 0   | "5931075".URPN.   | USPAT           | OR | ON | 2004/05/26 14:38 |

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|----------|-----|---|--------------------|----|----|------------------|
| S95      | 0   | "5931075".URPN.   | USPAT              | OR | ON | 2004/05/26 14:38 |
| S96      | 15  | ("2753001"   "3641858"  <br>"3867081"   "3918336"  <br>"4165665"   "4462290"  <br>"4515047"   "4621554"  <br>"4635511"   "4712461"  <br>"4919025"   "4956987"  <br>"5040397"   "5063801"  <br>"5301584").PN.  | USPAT              | OR | ON | 2004/05/26 14:38 |
| S97      | 2   | "5826479".URPN.   | USPAT              | OR | ON | 2004/05/26 14:38 |
| S98      | 99  | (rotating near2 cam) and shaft<br>and reciprocating and (cutting<br>same (tube or pipe))  | US-PGPUB;<br>USPAT | OR | ON | 2004/05/26 14:45 |
| S99      | 293 | (rotating near2 cam) and shaft<br>and reciprocating and (cutting<br>same (tube or pipe))  | USOCR              | OR | ON | 2004/05/26 14:46 |
| S10<br>0 | 5   | ("0582689"   "2297177"  <br>"3777606"   "4139134"  <br>"4926729").PN.   | USPAT              | OR | ON | 2004/09/20 16:05 |
| S10<br>1 | 7   | "5410929".URPN.   | USPAT              | OR | ON | 2004/09/20 16:05 |
| S10<br>2 | 9   | ("2323546"   "3005369"  <br>"3180196"   "3455196"  <br>"3971275"   "4043164"  <br>"4194422"   "4459886"  <br>"4913021").PN.   | USPAT              | OR | ON | 2004/09/20 16:07 |
| S10<br>3 | 3   | "4986154".URPN.   | USPAT              | OR | ON | 2004/09/20 16:08 |
| S10<br>4 | 22  | ("1910627"   "3160493"  <br>"3316790"   "3620104"  <br>"3824887"   "3962939"  <br>"4059893"   "4452105"  <br>"4530452"   "4731928"  <br>"5010797"   "5361489"  <br>"5412856"   "5481638"  <br>"5511305"   "5771573"  <br>"6115527"   "6161289"  <br>"6311581"   "6487939"  <br>"6508148"   "6577804").PN. | USPAT              | OR | ON | 2004/09/20 16:09 |
| S10<br>5 | 0   | "6688207".URPN.   | USPAT              | OR | ON | 2004/09/20 16:10 |
| S10<br>6 | 0   | "6688207".URPN.   | USPAT              | OR | ON | 2004/09/20 16:11 |



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| S10<br>7 | 26  | ("2521854"   "3903598"  <br>"4203539"   "4216004"  <br>"4619387"   "4621754"  <br>"4644647"   "4852244"  <br>"4976390"   "5031321"  <br>"5063672"   "5088637"  <br>"5123581"   "5125549"  <br>"5301868"   "5345952"  <br>"5351333"   "5360464"  <br>"5395025"   "5501385"  <br>"5563974"   "5838850"  <br>"5946986"   "5949938"  <br>"6023996"   "6189757").PN. | USPAT              | OR | ON | 2004/09/20 16:11 |
| S10<br>8 | 0   | "6695191".URPN.   | USPAT              | OR | ON | 2004/09/20 16:12 |
| S10<br>9 | 0   | "6695191".URPN.   | USPAT              | OR | ON | 2004/09/20 16:12 |
| S11<br>0 | 829 | 83/54   | US-PGPUB;<br>USPAT | OR | ON | 2004/09/20 16:15 |
| S11<br>1 | 464 | 83/54.ccls.   | US-PGPUB;<br>USPAT | OR | ON | 2004/09/20 16:24 |
| S11<br>2 | 20  | 83/189.ccls.  | US-PGPUB;<br>USPAT | OR | ON | 2004/09/20 16:25 |
| S11<br>3 | 440 | 83/917.ccls.  | US-PGPUB;<br>USPAT | OR | ON | 2004/09/20 17:15 |
| S11<br>4 | 115 | "83"/\$.ccls. and (tub or pipe) and<br>cutt\$4 and cam and reciproc\$4  | US-PGPUB;<br>USPAT | OR | ON | 2004/09/20 17:20 |
| S11<br>5 | 17  | (tub or pipe) same cutt\$4 same<br>cam same reciproc\$4   | US-PGPUB;<br>USPAT | OR | ON | 2004/09/20 17:20 |
| S11<br>6 | 280 | (tub or pipe) same cutt\$4 same<br>cam  | US-PGPUB;<br>USPAT | OR | ON | 2004/09/20 17:28 |
| S11<br>7 | 404 | (tub or pipe) same cutt\$4 same<br>reciproc\$4  | US-PGPUB;<br>USPAT | OR | ON | 2004/09/20 17:42 |
| S11<br>8 | 10  | "2670795"   | US-PGPUB;<br>USPAT | OR | ON | 2004/09/20 17:45 |
| S11<br>9 | 14  | "3120143"   | US-PGPUB;<br>USPAT | OR | ON | 2004/09/20 17:47 |
| S12<br>0 | 14  | "3234838"   | US-PGPUB;<br>USPAT | OR | ON | 2004/09/20 17:48 |
| S12<br>1 | 4   | "3455196"   | US-PGPUB;<br>USPAT | OR | ON | 2004/09/20 17:49 |
| S12<br>2 | 10  | "3762263"   | US-PGPUB;<br>USPAT | OR | ON | 2004/09/20 17:50 |
| S12<br>3 | 6   | "3921482"   | US-PGPUB;<br>USPAT | OR | ON | 2004/09/20 17:51 |
| S12<br>4 | 14  | "3924502"   | US-PGPUB;<br>USPAT | OR | ON | 2004/09/20 17:53 |



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| S12<br>5 | 15  | "3971275"   | US-PGPUB;<br>USPAT | OR | ON | 2004/09/20 17:53 |
| S12<br>6 | 2   | "2704124"   | US-PGPUB;<br>USPAT | OR | ON | 2004/09/21 08:49 |
| S12<br>7 | 905 | 83/628  | US-PGPUB;<br>USPAT | OR | ON | 2004/09/21 08:49 |
| S12<br>8 | 756 | 83/628.ccls.  | US-PGPUB;<br>USPAT | OR | ON | 2004/09/21 09:11 |
| S12<br>9 | 986 | (pipe or tube) same cutt\$4 same<br>cam   | US-PGPUB;<br>USPAT | OR | ON | 2004/09/21 09:12 |
| S13<br>0 | 96  | "82"/\$.ccls. and (pipe or tube)<br>same cutt\$4 same cam   | US-PGPUB;<br>USPAT | OR | ON | 2004/09/21 09:20 |
| S13<br>1 | 464 | "82"/\$.ccls. and (pipe or tube)<br>same cutt\$4 same cam   | USOCR              | OR | ON | 2004/09/21 09:24 |
| S13<br>2 | 136 | "83"/\$.ccls. and (pipe or tube)<br>same cutt\$4 same cam   | US-PGPUB;<br>USPAT | OR | ON | 2004/09/21 09:28 |
| S13<br>3 | 66  | "30"/\$.ccls. and (pipe or tube)<br>same cutt\$4 same cam   | US-PGPUB;<br>USPAT | OR | ON | 2004/09/21 09:29 |
| S13<br>4 | 64  | "29"/\$.ccls. and (pipe or tube)<br>same cutt\$4 same cam   | US-PGPUB;<br>USPAT | OR | ON | 2004/09/21 09:31 |
| S13<br>5 | 13  | "81"/\$.ccls. and (pipe or tube)<br>same cutt\$4 same cam   | US-PGPUB;<br>USPAT | OR | ON | 2004/09/21 09:31 |
| S13<br>6 | 4   | "411"/\$.ccls. and (pipe or tube)<br>same cutt\$4 same cam  | US-PGPUB;<br>USPAT | OR | ON | 2004/09/21 09:32 |
| S13<br>7 | 14  | "74"/\$.ccls. and (pipe or tube)<br>same cutt\$4 same cam   | US-PGPUB;<br>USPAT | OR | ON | 2004/09/21 09:33 |
| S13<br>8 | 27  | "74"/\$.ccls. and (pipe or tube)<br>same notch\$4 same cam  | US-PGPUB;<br>USPAT | OR | ON | 2004/09/21 09:35 |
| S13<br>9 | 15  | "81"/\$.ccls. and (pipe or tube)<br>same notch\$4 same cam  | US-PGPUB;<br>USPAT | OR | ON | 2004/09/21 09:39 |
| S14<br>0 | 8   | "82"/\$.ccls. and (pipe or tube)<br>same notch\$4 same cam  | US-PGPUB;<br>USPAT | OR | ON | 2004/09/21 09:39 |
| S14<br>1 | 44  | "83"/\$.ccls. and (pipe or tube)<br>same notch\$4 same cam  | US-PGPUB;<br>USPAT | OR | ON | 2004/09/21 09:44 |
| S14<br>2 | 24  | "29"/\$.ccls. and (pipe or tube)<br>same notch\$4 same cam  | US-PGPUB;<br>USPAT | OR | ON | 2004/09/21 11:19 |
| S14<br>3 | 735 | (pipe or tube) same notch\$4 same<br>cam  | US-PGPUB;<br>USPAT | OR | ON | 2004/09/21 09:49 |
| S14<br>4 | 734 | ((pipe or tube) same notch\$4<br>same cam) not (13-17)  | US-PGPUB;<br>USPAT | OR | ON | 2004/09/21 09:50 |
| S14<br>5 | 9   | ("2526336"   "2670795"  <br>"2829983"   "3259003"  <br>"3266356"   "4082022"  <br>"4440052"   "4470330"  <br>"5896796").PN. | USPAT              | OR | ON | 2004/09/21 10:24 |

|          |    |   |       |    |    |                  |
|----------|----|---|-------|----|----|------------------|
| S14<br>6 | 2  | "6128991".URPN.   | USPAT | OR | ON | 2004/09/21 10:24 |
| S14<br>7 | 26 | ("2192531"   "2579675"  <br>"2765848"   "2776003"  <br>"2964984"   "3099182"  <br>"3120143"   "3143018"  <br>"3153360"   "3180196"  <br>"3234838"   "3405583"  <br>"3410168"   "3446105"  <br>"3653301"   "3938413"  <br>"3971275"   "4180893"  <br>"4194422"   "4337680"  <br>"4459886"   "4476082"  <br>"4562760"   "4877174"  <br>"4930384"   "4986154").PN. | USPAT | OR | ON | 2004/09/21 10:25 |
| S14<br>8 | 1  | "5964137".URPN.   | USPAT | OR | ON | 2004/09/21 10:28 |
| S14<br>9 | 22 | ("2515260"   "2841314"  <br>"2984129"   "3032867"  <br>"3532113"   "3687166"  <br>"3766979"   "3833020"  <br>"3863667"   "3983897"  <br>"4177827"   "4215749"  <br>"4411459"   "4415000"  <br>"4434809"   "4516593"  <br>"4540011"   "4552170"  <br>"4730636"   "4809735"  <br>"5152310"   "5316037").PN.   | USPAT | OR | ON | 2004/09/21 10:29 |
| S15<br>0 | 6  | "5620020".URPN.   | USPAT | OR | ON | 2004/09/21 10:31 |
| S15<br>1 | 5  | ("0582689"   "2297177"  <br>"3777606"   "4139134"  <br>"4926729").PN.   | USPAT | OR | ON | 2004/09/21 10:31 |
| S15<br>2 | 7  | "5410929".URPN.   | USPAT | OR | ON | 2004/09/21 10:32 |
| S15<br>3 | 7  | "5410929".URPN.   | USPAT | OR | ON | 2004/09/21 10:33 |
| S15<br>4 | 5  | ("3495615"   "3606565"  <br>"3617145"   "3620115"  <br>"0114446").PN.   | USPAT | OR | ON | 2004/09/21 10:33 |
| S15<br>5 | 8  | "3762263".URPN.   | USPAT | OR | ON | 2004/09/21 10:33 |
| S15<br>6 | 2  | ("2028578"   "2840902").PN.   | USPAT | OR | ON | 2004/09/21 10:36 |
| S15<br>7 | 2  | "3810402".URPN.   | USPAT | OR | ON | 2004/09/21 10:36 |

|          |    |   |       |    |    |                  |
|----------|----|---|-------|----|----|------------------|
| S15<br>8 | 22 | ("1910627"   "3160493"  <br>"3316790"   "3620104"  <br>"3824887"   "3962939"  <br>"4059893"   "4452105"  <br>"4530452"   "4731928"  <br>"5010797"   "5361489"  <br>"5412856"   "5481638"  <br>"5511305"   "5771573"  <br>"6115527"   "6161289"  <br>"6311581"   "6487939"  <br>"6508148"   "6577804").PN. | USPAT | OR | ON | 2004/09/21 10:37 |
| S15<br>9 | 0  | "6688207".URPN.   | USPAT | OR | ON | 2004/09/21 10:38 |
| S16<br>0 | 0  | "6688207".URPN.   | USPAT | OR | ON | 2004/09/21 10:38 |
| S16<br>1 | 3  | ("0387408"   "2704124"  <br>"3153360").PN.  | USPAT | OR | ON | 2004/09/21 10:42 |
| S16<br>2 | 5  | "4459886".URPN.   | USPAT | OR | ON | 2004/09/21 10:42 |
| S16<br>3 | 5  | ("2507556"   "2780117"  <br>"3122033"   "4462291"  <br>"4485708").PN.   | USPAT | OR | ON | 2004/09/21 10:43 |
| S16<br>4 | 2  | "4763551".URPN.   | USPAT | OR | ON | 2004/09/21 10:43 |
| S16<br>5 | 5  | ("3869938"   "4708029"  <br>"5040294"   "5187866"  <br>"5218883").PN.   | USPAT | OR | ON | 2004/09/21 10:44 |
| S16<br>6 | 1  | "5868042".URPN.   | USPAT | OR | ON | 2004/09/21 10:44 |
| S16<br>7 | 9  | ("2304771"   "3129624"  <br>"3273433"   "3905264"  <br>"4108029"   "4109555"  <br>"4694718"   "4766792"  <br>"4872384").PN.   | USPAT | OR | ON | 2004/09/21 10:45 |
| S16<br>8 | 3  | "4964328".URPN.   | USPAT | OR | ON | 2004/09/21 10:45 |
| S16<br>9 | 6  | ("4763503"   "4875270"  <br>"4926667"   "5040294"  <br>"5085099"   "5115663").PN.   | USPAT | OR | ON | 2004/09/21 10:45 |
| S17<br>0 | 1  | "5187866".URPN.   | USPAT | OR | ON | 2004/09/21 10:46 |
| S17<br>1 | 10 | ("2852957"   "3447395"  <br>"3845667"   "3869938"  <br>"4113006"   "4211192"  <br>"4269438"   "4293995"  <br>"4382390"   "4597365").PN.   | USPAT | OR | ON | 2004/09/21 10:46 |
| S17<br>2 | 19 | "4708029".URPN.   | USPAT | OR | ON | 2004/09/21 10:46 |

|          |     |  |                    |    |    |                  |
|----------|-----|--|--------------------|----|----|------------------|
| S17<br>3 | 27  | "74"/\$.ccls. and (pipe or tube)<br>same notch\$4 same cam   | US-PGPUB;<br>USPAT | OR | ON | 2004/09/21 11:21 |
| S17<br>4 | 137 | 74/10.6.ccls.  | US-PGPUB;<br>USPAT | OR | ON | 2004/09/21 11:29 |
| S17<br>5 | 83  | 83/178.ccls.   | US-PGPUB;<br>USPAT | OR | ON | 2004/09/21 11:31 |
| S17<br>6 | 57  | 83/185.ccls.   | US-PGPUB;<br>USPAT | OR | ON | 2004/09/21 11:32 |
| S17<br>7 | 12  | 83/191.ccls. and cam   | US-PGPUB;<br>USPAT | OR | ON | 2004/09/21 11:36 |
| S17<br>8 | 30  | 83/582.ccls. and cam   | US-PGPUB;<br>USPAT | OR | ON | 2004/09/21 11:42 |
| S17<br>9 | 50  | 83/588.ccls. and cam   | US-PGPUB;<br>USPAT | OR | ON | 2004/09/21 11:43 |
| S18<br>0 | 27  | 83/627.ccls. and cam   | US-PGPUB;<br>USPAT | OR | ON | 2004/09/21 11:44 |
| S18<br>1 | 119 | 83/628.ccls. and cam   | US-PGPUB;<br>USPAT | OR | ON | 2004/09/21 11:48 |
| S18<br>2 | 38  | 83/914.ccls. and cam   | US-PGPUB;<br>USPAT | OR | ON | 2004/09/21 11:49 |
| S18<br>3 | 19  | 83/916.ccls. and cam   | US-PGPUB;<br>USPAT | OR | ON | 2004/09/21 11:49 |
| S18<br>4 | 55  | 83/917.ccls. and cam   | US-PGPUB;<br>USPAT | OR | ON | 2004/09/21 11:49 |
| S18<br>5 | 3   | ("1432073"   "1764129"  <br>"3084580").PN.   | USPAT              | OR | ON | 2004/09/21 11:51 |
| S18<br>6 | 3   | "4750393".URPN.  | USPAT              | OR | ON | 2004/09/21 11:52 |
| S18<br>7 | 20  | ("2783838"   "2919794"  <br>"3527422"   "3760674"  <br>"3854356"   "3999715"  <br>"4002307"   "4007884"  <br>"4014476"   "4023741"  <br>"4033519"   "4052017"  <br>"4099679"   "4108388"  <br>"4157048"   "4491282"  <br>"4496109"   "4716801"  <br>"4789277"   "4872381").PN. | USPAT              | OR | ON | 2004/09/21 11:53 |
| S18<br>8 | 2   | "5033345".URPN.  | USPAT              | OR | ON | 2004/09/21 11:53 |
| S18<br>9 | 2   | "5033345".URPN.  | USPAT              | OR | ON | 2004/09/21 11:59 |
| S19<br>0 | 12  | ("0018025"   "0723358"  <br>"1318177"   "1848642"  <br>"2672682"   "4036092"  <br>"4130034"   "4468995"  <br>"4483223"   "4750393"  <br>"4813314"   "4881399").PN.   | USPAT              | OR | ON | 2004/09/21 12:00 |

|          |      |  |                    |    |    |                  |
|----------|------|--|--------------------|----|----|------------------|
| S19<br>1 | 7    | "5609081".URPN.  | USPAT              | OR | ON | 2004/09/21 12:01 |
| S19<br>2 | 7    | "5609081".URPN.  | USPAT              | OR | ON | 2004/09/21 12:03 |
| S19<br>3 | 2148 | punch same cam   | US-PGPUB;<br>USPAT | OR | ON | 2004/09/21 16:21 |
| S19<br>4 | 695  | punch same cam same shaft  | US-PGPUB;<br>USPAT | OR | ON | 2004/09/21 16:21 |
| S19<br>5 | 141  | "83"/\$.ccls. and punch same cam<br>same shaft   | US-PGPUB;<br>USPAT | OR | ON | 2004/09/21 16:34 |
| S19<br>6 | 0    | "82"/\$.ccls. and punch same cam<br>same shaft   | US-PGPUB;<br>USPAT | OR | ON | 2004/09/21 16:34 |
| S19<br>7 | 1    | "81"/\$.ccls. and punch same cam<br>same shaft   | US-PGPUB;<br>USPAT | OR | ON | 2004/09/21 16:34 |
| S19<br>8 | 110  | "29"/\$.ccls. and punch same cam<br>same shaft   | US-PGPUB;<br>USPAT | OR | ON | 2004/09/21 16:40 |
| S19<br>9 | 32   | "74"/\$.ccls. and punch same cam<br>same shaft   | US-PGPUB;<br>USPAT | OR | ON | 2004/09/21 16:42 |
| S20<br>0 | 107  | "72"/\$.ccls. and punch same cam<br>same shaft   | US-PGPUB;<br>USPAT | OR | ON | 2004/09/21 16:46 |
| S20<br>1 | 49   | "72"/\$.ccls. and punch same cam<br>same piston  | US-PGPUB;<br>USPAT | OR | ON | 2004/09/21 17:04 |
| S20<br>2 | 4    | ("2725916"   "4306443"  <br>"4550588"   "4691553").PN.   | USPAT              | OR | ON | 2004/09/21 17:04 |
| S20<br>3 | 0    | "5022255".URPN.  | USPAT              | OR | ON | 2004/09/21 17:04 |
| S20<br>4 | 429  | "83"/\$.ccls. and punch same cam   | US-PGPUB;<br>USPAT | OR | ON | 2004/09/21 17:05 |
| S20<br>5 | 288  | ("83"/\$.ccls. and punch same cam<br>) not ("83"/\$.ccls. and punch same<br>cam same shaft)  | US-PGPUB;<br>USPAT | OR | ON | 2004/09/21 17:05 |
| S20<br>6 | 12   | ("0018025"   "0723358"  <br>"1318177"   "1848642"  <br>"2672682"   "4036092"  <br>"4130034"   "4468995"  <br>"4483223"   "4750393"  <br>"4813314"   "4881399").PN. | USPAT              | OR | ON | 2004/09/21 18:11 |
| S20<br>7 | 7    | "5609081".URPN.  | USPAT              | OR | ON | 2004/09/21 18:12 |
| S20<br>8 | 4    | ("2725916"   "4306443"  <br>"4550588"   "4691553").PN.   | USPAT              | OR | ON | 2004/09/21 18:17 |
| S20<br>9 | 0    | "5022255".URPN.  | USPAT              | OR | ON | 2004/09/21 18:18 |
| S21<br>0 | 0    | "5022255".URPN.  | USPAT              | OR | ON | 2004/09/21 18:18 |

|          |     |                             |                    |    |    |                  |
|----------|-----|-----------------------------|--------------------|----|----|------------------|
| S21<br>1 | 2   | ("4819021"   "4988030").PN. | USPAT              | OR | ON | 2004/09/21 18:18 |
| S21<br>2 | 6   | "5628502".URPN.             | USPAT              | OR | ON | 2004/09/21 18:19 |
| S21<br>3 | 84  | 83/178.ccls.                | US-PGPUB;<br>USPAT | OR | ON | 2005/03/08 14:53 |
| S21<br>4 | 573 | 83/178-195.ccls.            | US-PGPUB;<br>USPAT | OR | ON | 2005/03/08 14:53 |
| S21<br>5 | 73  | 83/178-195.ccls. and cam    | US-PGPUB;<br>USPAT | OR | ON | 2005/03/08 14:56 |
| S21<br>6 | 30  | 83/582.ccls. and cam        | US-PGPUB;<br>USPAT | OR | ON | 2005/03/08 14:57 |
| S21<br>7 | 51  | 83/588.ccls. and cam        | US-PGPUB;<br>USPAT | OR | ON | 2005/03/08 14:59 |
| S21<br>8 | 27  | 83/627.ccls. and cam        | US-PGPUB;<br>USPAT | OR | ON | 2005/03/08 15:17 |
| S21<br>9 | 121 | 83/628.ccls. and cam        | US-PGPUB;<br>USPAT | OR | ON | 2005/03/08 15:18 |
| S22<br>0 | 39  | 83/914.ccls. and cam        | US-PGPUB;<br>USPAT | OR | ON | 2005/03/08 15:19 |
| S22<br>1 | 19  | 83/916.ccls. and cam        | US-PGPUB;<br>USPAT | OR | ON | 2005/03/08 15:19 |
| S22<br>2 | 55  | 83/917.ccls. and cam        | US-PGPUB;<br>USPAT | OR | ON | 2005/03/08 15:21 |
| S22<br>3 | 109 | 83/54.ccls. and cam         | US-PGPUB;<br>USPAT | OR | ON | 2005/03/08 15:22 |
| S22<br>4 | 9   | 83/36.ccls. and cam         | US-PGPUB;<br>USPAT | OR | ON | 2005/03/08 15:22 |
| S22<br>5 | 3   | 83/471.ccls. and cam        | US-PGPUB;<br>USPAT | OR | ON | 2005/03/08 15:22 |
| S22<br>6 | 24  | 83/452.ccls. and cam        | US-PGPUB;<br>USPAT | OR | ON | 2005/03/08 15:23 |
| S22<br>7 | 15  | 82/46.ccls. and cam         | US-PGPUB;<br>USPAT | OR | ON | 2005/03/08 15:23 |
| S22<br>8 | 5   | 83/149.ccls. and cam        | US-PGPUB;<br>USPAT | OR | ON | 2005/03/08 15:23 |
| S22<br>9 | 6   | 83/189.ccls. and cam        | US-PGPUB;<br>USPAT | OR | ON | 2005/03/08 15:24 |
| S23<br>0 | 9   | 30/91.2.ccls. and cam       | US-PGPUB;<br>USPAT | OR | ON | 2005/03/08 15:25 |
| S23<br>1 | 11  | 74/106.ccls. and cam        | US-PGPUB;<br>USPAT | OR | ON | 2005/03/08 15:25 |
| S23<br>2 | 2   | 83/437.6.ccls. and cam      | US-PGPUB;<br>USPAT | OR | ON | 2005/03/08 15:25 |
| S23<br>3 | 57  | 83/602.ccls. and cam        | US-PGPUB;<br>USPAT | OR | ON | 2005/03/08 15:25 |